

THE NEW FM 100-5: A RETURN TO OPERATIONAL ART

**A MONOGRAPH
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By Major Michael McCormick, USA, 39 pages.

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These three features of operational art provide the methodology with which to examine the characteristics of the 1986, 1993, and 1998 doctrine. The methodology demonstrates that the 1998 FM 100-5 better meets the features of size, balance, and comprehensiveness.

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Introduction

When well-conceived and clearly articulated, doctrine can instill confidence throughout an army. An army's doctrine, therefore, can have the most profound effect on its performance in war.¹

Successful military organizations change to meet future requirements – wisely during times of peace and quickly during times of war. Part of this “change” certainly includes doctrine. “Doctrine is an approved, shared idea about the conduct of warfare that undergirds an army's planning, organization, training, leadership style, tactics, weapons, and equipment.”²

The coordinating draft of the 1998 Field Manual (FM) 100-5, the keystone doctrinal manual of the U.S. Army, is ready for distribution and review. During its review, the manual will face both internal and external examination from the Department of Defense and its subordinate agencies. The product of these examinations, along with the resulting “informed debate,” should help to produce a more sound doctrine.

A key change within the 1998 FM 100-5 is that it offers a more comprehensive approach to doctrine than its antecedents. The 1998 FM 100-5 folds the concepts of war and operations other than war (OOTW) into one – *Operations*. Past versions of FM 100-5 failed to address or separated the notions of OOTW and war. The 1998 FM 100-5 maintains that the Army exists to compel, deter, reassure and support. It further asserts that, in order to accomplish these assigned missions, “Army forces conduct four basic categories of operations: Offense, Defense, Stability, and Support.”³

The introduction of the 1993 FM 100-5 marked an era of great change both from without and within the Army. Despite being touted as an operational manual, the current FM 100-5 adopted a greater strategic focus. "In 1993, fundamental Army doctrine was further broadened when it was extended and linked to the strategic level of war."⁴ The presentation of OOTW, perhaps affiliated with the manual's strategic focus, now stirs debate from critics.⁵

The strategic outlook of the 1993 FM 100-5 marked a departure from an operational focus that the Army had nurtured over the previous decade. A genesis of this operational focus was the adoption in 1982 of the notion of an operational level of war. The 1986 FM 100-5, in continuing this operational focus, introduced and defined the term operational art as: "The employment of military forces to attain strategic goals in a theater or theater of operations through the design, organization, and conduct of campaigns and major operations."⁶ More simply, operational art is the ability to link tactical means to strategic ends. Operational art is important because without this linkage tactical victories may fail to achieve the nation's strategic purpose.

The purpose of this monograph is to examine the development of the 1998 FM 100-5. The primary research question is: Do the changes proposed in the coordinating draft of the 1998 FM 100-5 mark a return to the concept of operational art? To determine an answer to this question, this monograph must first answer three subordinate/supporting questions. The first supporting question is: What are the key changes presented in the 1998 FM 100-5? Examining the changes in the new manual will provide the reader with a base

understanding of how it differs from previous versions of FM 100-5. Second the monograph answers: What is the theory (and value) of the notion of operational art? This broad question centers around a comparison between the FM 100-5's developed in the 1990's and those from the 1980's. It asks how they severally adhere to the attributes of operational art. The third subordinate question is: How are the changes in doctrine applied pragmatically? The intent is to illustrate, through a practical application of historical case studies, the efficacy of the comprehensive approach inherent in the 1998 FM 100-5.

The main body of the monograph consists of three sections that correspond to the three supporting questions. These sections include: a doctrinal overview, a discussion of operational art, and the practical application of recent military operations. Information gained in answering the three supporting questions will help answer the primary research question. The conclusion will restate and answer the research question, summarize the findings and provide any applicable recommendations.

The importance of the Army keystone manual's adherence to the attributes of operational art is significant for three reasons: First, FM 100-5 drives the development of subordinate manuals. Second, Army doctrine has led the development of joint doctrine. Finally, and perhaps most importantly, the Army education system (heavily influenced by FM 100-5) produces soldiers and officers whose long term impact as future leaders dwarf the five to seven year significance of a flawed doctrinal manual.

Doctrinal Overview

Doctrine provides an officially sanctioned framework for common understanding, dialogue, training, learning, and most importantly, action. Doctrine, like a football playbook, is eminently practical.⁷

The U.S. Army has a long history of tactically focused doctrine. The keystone manual, FM 100-5 Operations, can trace its lineage back to 1905 and the publication of the first *Field Service Regulations*. Fourteen editions later, we arrive at a pending document that still tries to provide this framework for common understanding of army operations. Over most of the last two decades, however, the focus of our principle doctrine has shifted out of the tactical realm. The impetus for this shift was a painful lesson learned from the Vietnam War – you can win every battle and still lose the war.⁸

This section will first examine recent historical trends in doctrine development, specifically from 1976 to the 1986. Once established, this foundation will provide a framework from which we then can examine the current (1993) and pending (1998) versions of FM 100-5. These examinations will try to identify the significant changes (positive and negative) in the 1986, 1993, and 1998 doctrine.

The U. S. Army returned from Vietnam in a shattered state. Not only had it failed to win, it had to accept great change – something that the military often finds most difficult. T.E. Lawrence once dryly remarked that “the regular officer has the tradition of forty generations of serving soldiers behind him, and to him the old weapons are the most honored.”⁹ Change constituted a smaller volunteer force and an equipment modernization program to remedy a decade

long void. The recognition of a more lethal battlefield, as witnessed by the Yom Kippur War, emphasized the need for change from conditions that governed during war in Southeast Asia. This, along with a growing Soviet conventional threat in Europe, produced a prescriptive and tactically focused doctrine fixated on a forward defense.¹⁰ The 1976 FM 100-5 and the "Active Defense" it proposed was important for what was not contained in the manual more than for what was. The preoccupation with firepower, vice the need to address maneuver, set off a strong debate. Like any vigorous debate, the discourse that ensued following the publication of the 1976 manual, was healthy for the Army. An important ingredient missing from that manual was any operational content. The Army seemed fixated with fighting and winning the first battle, so much so that it forgot the importance of winning the last.¹¹

The "Airland Battle" doctrine introduced in the 1982 FM 100-5 was an important first step in rectifying the inadequacies of the Active Defense. Professing the necessity of fighting outnumbered and winning, the manual marked a return to the primacy of the offense and the maintenance of the initiative required to conduct it. The 1982 edition also introduced four tenets of Airland Battle – initiative, agility, depth, and synchronization. A considerable change in 1982 was a move away from the tactical level of war. The manual presented the notion of an operational level of war – that level of war that links the tactical means with strategic ends.

The concept of a third level of war was not totally new. Echoing the traditional idea of grand tactics, and already recognized in the 20th century

German and Soviet Army doctrine, the operational level was something new for the U.S. Army.¹² The inclusion of the operational level of war was a difficult but necessary decision. In an attempt to help solve the maneuver-firepower debate that had raged on since the 1976 manual, the Commander of Training and Doctrine Command (TRADOC), General Glen K. Otis, directed the inclusion of the operational level of war into the 1982 manual.¹³ Four years later, the 1986 FM 100-5 sustained the manual's operational focus by introducing the term operational art into our doctrinal lexicon.

Overall, however, the 1986 manual was more "theoretical and general"¹⁴ than its predecessors for at least two reasons. First, the Army's focus was extending beyond Western Europe. The recognition of less intensive conflict and the development of light infantry divisions marked this expanding focus. Second, the manual could afford to be less specific as it was expected to provide "a long-term foundation for the development of more transitory [and specific] tactics, techniques, and procedures."¹⁵

The 1982 and 1986 manuals were a distinct change for Army doctrine. Some argue the changes were revolutionary. According to Bill Robertson, a member of TRADOC's Force Design Directorate, it was the realization that the well-echeloned Red Army would be attacked throughout its depth, that ultimately left the Soviet Union with no conventional military options in Europe.¹⁶ In any event, the changes mark a clear shift in doctrinal focus to the operational level of war. "Though changes in national security policy always underlay the changes

in doctrine, Operations [FM 100-5] was almost wholly tactically focused until the advent of the Airland Battle editions of the 1980s.”¹⁷

The 1993 FM 100-5 resonates with the global social, political and economic changes brought on by the collapse of the Soviet Union. In addition to these changes, the 1993 FM 100-5 was further influenced by the lessons of then recent operations in Panama and Southwest Asia, and the impact of emerging technologies. Some of the more significant changes include a greater emphasis on the strategic level of war, OOTW, depth and simultaneous attack, commander’s intent, conflict termination, battlespace, power projection, and a fifth tenet – versatility. Though important, power projection and the addition of versatility, reflect the impact of the globalization of U.S. military problems, an unanticipated peace dividend, and merit no further discussion.

Perhaps the most significant change in the 1993 FM 100-5 was a shift in emphasis away from the operational level of war towards the strategic level. This shift to a strategic focus, though perhaps not as tangible as others in the manual, is important because of its overarching effect on the entire manual.

A significant change in the 1993 doctrine was the extension of operations into the strategic realm in keeping with the wide latitude of U.S. military actions permitted by the collapse of the Soviet threat and the new doctrinal emphasis on joint and combined operations and operations other than war.¹⁸

A word search of the 1986 and 1993 manuals confirms this shift to the strategic level of war. The word (or form of the word) “strategic” appears 104 times in the 1986 manual and a resounding 233 times in the 1993 manual.

Another characteristic of the 1993 manual associated with strategic focus, is its linkage to the strategic level. "This keystone manual links Army roles and missions to the National Military Strategy [and hence the National Security Strategy]..."¹⁹ A problem of discontinuity may develop when the strategy changes – which has occurred at least twice since 1993. "Such linkage is important, and we should continue to seek it. But we should be sparing in our specificity, refusing to cite certainties that do not exist."²⁰ In contrast, the 1998 manual links itself to a more solid statement of function or purpose – federal law. Title 10 of the United States Code (dated 1956) requires that "the Army... shall be organized, trained, and equipped primarily for prompt and sustained combat incident to operations on land."²¹

The inclusion of OOTW into the Army's operational doctrine was another conspicuous change from the manuals of the 1980's. The conduct of OOTW missions is not new to the U.S. Army – we have a long history dating back at least as far the American Indian Wars of the 19th century. The concept is also, in fact, not new to our doctrine. The 1962 FM 100-5 contains an entire chapter titled "Situations Short of War."²² Some critics believed that the introduction of OOTW into a "warfighting" manual was a mistake – thinking that its inclusion would somehow dilute the purpose of the doctrine.²³ This thinking is quite wrong. Placing OOTW into FM100-5 was merely an example of operational doctrine taking its proper direction from strategy, notwithstanding the type activity involved.

Another measured change in the 1993 manual involved considerations of depth and simultaneous attack. "The dominating idea and critical change of the 1993 war fighting doctrine was the new vision of depth and simultaneous attack."²⁴ The aim of depth and simultaneous attack is to achieve a relatively antiseptic and brief conflict. Notwithstanding the inherent efficiency of attacking an enemy in depth, the recent advances in weapons technology perpetuate the human desire for bloodless wars. Similarly, constraints, amplified by almost real time media coverage, place incredible demands on political and military leaders to end conflicts quickly. One needs to look no further than the impact of reports of the "highway of death" in Kuwait, to appreciate the ageless demand for both brief and antiseptic wars.²⁵

The emphasis on simultaneous attack, in the 1993 doctrine, ignores the complementary aspect of sequential attack. A word count of the 1986, 1993, and 1998 manuals reflect the following imbalance:

	<u>1986</u>	<u>1993</u>	<u>1998</u>
Sequential	4	8	6
Simultaneous	17	73	45

These figures do not indicate a correct balance between sequential and simultaneous as it is written in doctrine. They merely suggest a marked increase of the term simultaneous, in the 1993 manual.

The 1993 manual defines battlespace as "a physical volume that expands or contracts in relation to the ability to acquire and engage the enemy."²⁶

Battlespace is a term that allows the commander the freedom to form his view of the battlefield without graphic constraints. Given the increased range of weapons (both enemy and friendly), and the corresponding separation of the close and deep fight, the concept of battlespace is an important consideration for commanders as they conduct mission analysis. The 1998 manual presents battlespace in a less nebulous fashion than its 1993 introduction. The dimensions of battlespace (time, space, and activity) are discussed in a more succinct fashion, and thus provide better definition.

Commander's intent was a welcome addition to the 1993 manual. Though briefly mentioned in past manuals, commander's intent was addressed pragmatically in 1993. Lieutenant General Don Holder, an author of the 1982 and 1986 manuals, wrote the following comment: "The 1993 manual...is far superior to its predecessors in setting the previously misunderstood business of commander's intent in its proper relationship to the concept of the operation."²⁷ The 1998 manual continues to stress commander's intent with two significant modifications. First, is the addition of "key tasks." Key tasks "provide the link between the mission and the concept of the operation."²⁸ The second, is a definitive requirement that the commander personally prepare the intent statement. Together, these changes should help commanders write intent statements that avoid becoming merely a restatement of the concept of operations.

The formal inclusion of conflict termination into our doctrine showed a coherent thought process. Since conflict termination (like OOTW) is something

the Army has always done, the inclusion of conflict termination into doctrine, was a logical step.²⁹ One could also surmise, that the inclusion of conflict termination marked an attempt to learn from errors (identified with the benefit of hindsight), in what were otherwise overwhelmingly victories in Operations Just Cause and Desert Storm. Given the many factors that weigh on the conduct of operations, which lately seem to imply an emphasis on brevity, the time to consider conflict termination is during the initial planning.

Despite these substantive changes, the Army received the 1993 manual without the healthy discourse that followed its three predecessors. As demonstrated in earlier manuals, particularly with the 1976 manual, it is important to have discourse – if nothing more, it shows people are reading and critically thinking about the doctrine. The indifferent response given the 1993 manual can be traced to at least two causes: First, the manual was well staffed, with consensus built among the senior leaders.³⁰ Second, most of the Army was just too busy.³¹ In any event, the manual was in use for close to four years, providing its framework for common understanding, when the requirement to change struck again.

Over the last twenty years, the shelf-life of FM 100-5 is somewhere between four and seven years. While in theory, doctrine is changed or discarded when it no longer effectively guides action or interprets events,³² in practice, the U.S. Army routinely revises its doctrine. Regardless of the perceived adequacy of the 1993 manual, it was time to begin looking at a revision of FM 100-5. Table 2-1, shown below, lists the guidance from the

TRADOC and Combined Arms Center (CAC) Commanders to the new manual's four man writing team.

<u>TRADOC Commander</u>	<u>CAC Commander</u>
<ul style="list-style-type: none"> • More homogenous approach resulting in "comprehensive" doctrine. Fold...military activities short of general war into the body of Army operational doctrine and not treat them as separate...the term OOTW should not appear. • Use TRADOC PAM 525-5 to inform your debates...strike the delicate balance between long-range conceptual development and the immediate time horizon our doctrine must embrace. • Address joint, interagency and combined aspects of warfare. 	<ul style="list-style-type: none"> • Address the impact and integration of information technologies at different levels throughout the force. • Remain consistent with Joint Pub 3.0, but remember services' responsibility to lead as well as reflect joint doctrine. • Support operations and stability operations to be included. • Watch Advanced Warfighting Experiment's (AWE's) closely...some will be applicable, some will not. • Assess continued relevance of deep, close, rear.³³
Table 2-1, Senior Leader Guidance to FM 100-5 Writing Team	

The coordinating draft of the 1998 FM 100-5 maintains a dual focus. First, it describes operational art. Second, it describes how we fight, the art of combat operations, which includes tactical principles and forms of maneuver.³⁴ It is a comprehensive doctrine presented in five distinct parts: The Army and Conflict, Fundamentals of Army Operations, The Art of Operations, Conducting Operations, and Enabling Operations. Changes in this operationally focused manual include the following six points: War is listed as a form of conflict (not the reverse); tactical functions are introduced; existing operating systems are

revamped; war and OOTW are integrated into four different categories of operations; a set of revised principles of operations (vice separate sets of principles for war and OOTW) are introduced; and finally, the “Tenets of Army Operations” become “Characteristics of Army Operations.” The final two points, though important to mention, do not require elaboration. The revised principles of operations result from the integration of war and OOTW. Aside from the shift of “synchronization” to “orchestration,”³⁵ the change from tenets to characteristics is mostly one of semantics.

First of all, war is difficult to define. The new manual describes war as “the most violent form of conflict.”³⁶ This definition is somewhat general and simplistic – with good reason. “War in general is simply far easier to write about than war in particular.”³⁷ The manual avoids the pitfalls of its predecessor and covers war, and OOTW as well, under the conceptual framework of conflict. In his paper titled A General Theory of Conflict: Bosnia, Strategy and the Future, Colonel David Fastabend (a member of the 1998 FM 100-5 writing team) advances the theory that conflict incorporates two interdependent components: logic and violence.

Logic attempts to revise a conflict participant’s ideas through the exchange of information and the reasoned comparison of ideas to reality. Violence attempts this revision through the presentation of unfavorable alternatives to compliance: injury destruction or death.³⁸

This theoretical construct, incorporating the interdependent components of conflict, is all encompassing. The simplistic construct prevents loopholes endemic to the war/OOTW construct provided in the 1993 FM 100-5.

Second, the 1998 manual introduces five tactical (core) functions – see, shape, shield, strike, and move. These core functions are not to be confused with the combat functions (battlefield operating systems) presented in the previous manual. These core functions, “are the fundamental actions forces take to apply military power. They should not be viewed independently of one another but as inseparable parts of a whole.”³⁹ Derived from JFC Fuller’s and LTC E.S. Johnson’s five and six respective functions,⁴⁰ posited in the 1920’s and 1930’s, the proposed functions add to the new manual’s pragmatic and holistic approach to operations.

Operating systems constitute the third significant change implemented by the 1998 manual. Previously referred to as seven “combat functions” or “battlefield operating systems” (BOSSs), operating systems are now presented in terms of two integrating (command and control, combat service support) and six engagement (information dominance, maneuver, air defense, reconnaissance/surveillance/intelligence, mobility/survivability, and fire support) systems. Operating systems are “the aggregate of soldiers, equipment, material, and procedures organized as an entity to perform the core functions [see, shape, shield, strike, and move].”⁴¹ Interestingly, the term battle command, introduced in 1993, does not appear as an operating system in the new manual.

Finally, and perhaps the most dramatic change in the new manual, is the integration of war and OOTW into four different categories of operations. This is the method the writing team used to meet the requirement imposed by the TRADOC Commander, of folding operations short of war into the body of

operational doctrine. The four categories of operations are offensive, defensive, stability, and support operations.

Offensive operations “are those that carry the fight to the enemy. They are the decisive form of warfare, the commander’s ultimate means of imposing his will on the enemy.”⁴² The structure of the chapter on offensive operations combines two chapters (fundamentals of the offense, and planning/conducting the offense) from the previous manual. The framework and forms of offensive maneuver remain virtually unchanged. Spoiling/counter attacks and raids/feints are subsumed under the terms “attacks in the defense” and “limited objective attacks” respectively. An important addition to this chapter is the inclusion of a section labeled “phases of offensive operations.” The section addresses not only the preparation and actual attack, but it expands to address the necessity of exploitation and pursuit to finish the offensive operation.

Defensive operations “are those undertaken to cause an enemy attack to fail. Alone, they achieve no decision. They must ultimately be combined with or followed by offensive action.”⁴³ The structure of this chapter, like offense chapter, combines two chapters from the previous manual. Sections discussing the framework and phases of defensive operations also mirror the offense chapter. The key change to this chapter is that it includes retrograde operations, instead of treating them separately as did the 1993 manual.

Stability operations “apply military power to influence the political environment, facilitate diplomacy, and disrupt specified illegal activities.”⁴⁴

Stability operations incorporate almost all of what was referred to as OOTW in the last manual. Peacekeeping and peace enforcement operations are listed under the broader terminology of peace operations – which is in keeping with the structure of FM 100-23, Peace Operations. Respective failure and success in Somalia and Bosnia, have driven the doctrine to specifically mention “show of force” in stability operations.

Interestingly, the chapter on stability operations (unlike offensive, defensive, and support operations) fails to include a section on “phases of stability operations.” The reason for this apparent omission is that stability operations vary greatly, and are too numerous to fit the convenient phasing framework of the other operations.⁴⁵

Support operations “provide essential supplies and services to assist designated groups. They are conducted mainly to relieve suffering and assist civil authorities response to crises.”⁴⁶ The terms “humanitarian assistance and disaster relief,” originally listed as a OOTW activity, are now embodied as a support operation – specifically as humanitarian and environmental assistance. In a likely effort to remove those operations that “are normally characterized by lack of an active opponent,”⁴⁷ the manual’s writers created support operations. This would further serve to help break the war – OOTW tension that came with less intensive military operations. Like the chapters on offense and defense, this chapter has sections discussing both framework and phases for support operations.

This doctrinal overview has shown the key changes presented in the 1998 FM100-5, with respect to its recent predecessors. From the initial continuation of a tactically focused doctrine, published in 1976, U.S. Army doctrine evolved towards a more operational focus by 1986. An examination of the changes incorporated in the 1993 doctrine demonstrate a shift to the strategic level of war. Overall, the three doctrinal manuals (1986, 1993, 1998) exhibit the characteristics depicted in Table 2-2:

<ul style="list-style-type: none"> • 1986: <ul style="list-style-type: none"> • Operational vs. tactical focus • Displays good balance (firepower/maneuver, sequential/simultaneous) • OOTW not addressed • Commander's intent hardly mentioned • Healthy discourse after publication • 1993: <ul style="list-style-type: none"> • Strategic vs. Operational focus • Link to strategy (NMS) is tenuous • Inclusion of OOTW (though fragmented) • Overemphasis of simultaneous operations • Overemphasis of the offense • Introduction of battlespace • Commander's intent pragmatically addressed • Conflict termination considered • No discourse after publication • 1998: <ul style="list-style-type: none"> • Better link to strategy (federal law) • War as a form of conflict and the four categories of operations • Battlespace less nebulous • Better presentation of commander's intent • Tactical functions • Balance between offensive and defensive operations • Balance between simultaneous and sequential operations
Table 2-2, Characteristics of Recent FM 100-5's

Without further analysis, it would be premature to argue that the changes proposed by the 1998 FM 100-5 mark a return to a focus on operational art. In order to help determine the answer to the research question, it is necessary to first examine and better define the term operational art.

Operational Art

Operational art is sequencing a series of battles and major operations which will constitute a campaign – the goal of the campaign is a strategic objective.⁴⁸

The U.S. Army's adoption of operational art is perhaps the most important doctrinal change since the conclusion of World War II.⁴⁹ It is also, arguably, the unseen lesson learned of that climactic struggle. For the concept of operational art did not simply appear in the 1980s as if a light bulb was turned on over the heads of doctrine writers. Today, the definition of operational art varies from one doctrinal manual to another. Operational art is also often confused with the operational level of war. The operational level of war is that middle level of war that links the strategic and tactical levels; while operational art is the activity conducted at the operational level of war. Joint Publication 5-0, Doctrine for Planning Joint Operations, clearly delineates the two terms.

Joint operation planning at the operational level links the tactical employment of forces to strategic objectives. The focus at this level is on operational art--the employment of military forces to attain strategic and/or operational objectives through the design, organization, integration, and conduct of strategies, campaigns, major operations, and battles.⁵⁰

The purpose of this section is to discuss the origins and theoretical aspects of operational art, and to further determine its value (in the form of features) as an operational concept. A further examination of doctrinal

differences (characteristics discussed in the previous section) vis-à-vis the proposed features of operational art will identify possible merit in the alignment of emerging doctrine.

The origins of operational art defy specific chronological determination. The debate as to who was the first practitioner of operational art is not terribly important. What is important is the ability to understand and properly apply operational art when employing military forces. The concept of what we today understand as operational art was born in the minds of German and Soviet military theorists, who recognized the industrial revolution's dramatic effect on the conduct of war. Sigismund von Schlichting, a late 19th century German Army officer who studied the works of Carl von Clausewitz and Helmut von Moltke, was perhaps the first who recognized the quantitative and qualitative changes in warfare. "Where Clausewitz had defined strategy as the art of battles for the purpose of the war, Schlichting emphasized the importance of using operational maneuver to achieve the purposes of war."⁵¹

The Soviet theorists of the 1920s and 1930s credited with furthering the evolution of operational art include: A.A. Svechin, V.K. Triandafillov, M.N. Tukhachevsky, and G.S. Isserson. Most of these theorists studied at the General Staff Academy on the translated works of Schlichting, Clausewitz, and Moltke (among others). Working without the limitations of an entrenched bureaucracy (which was swept away by World War I and the Russian Revolution), these theorists advanced ideas that are the very foundation of operational art today. Svechin implied a new level of warfare by claiming that

operations link strategy and tactics. Triandafillov stressed the importance of successive operations. Tukhachevsky asserted the significance of deep operations. Finally, Isserson advanced his aggregation theory, whereby operational art served to re-aggregate the effects of military forces. This served to correct an unforeseen impact of technology that, since World War I, had created a vast diversity (airplanes, tanks and long range artillery) in force effects and characteristics.⁵²

Despite these theoretical improvements in operational warfighting, the Stalin purges of the 1930s hampered the Red Army's early World War II performance against the Third Reich. Within two years, the USSR implemented the practice of operational art -- with devastating effect on the German Army. From Stalingrad to Berlin, during 1943-45, the Soviets perfected large scale sequential and simultaneous operations with emphasis on the encirclement -- a complex maneuver that the Red Army executed successfully about 50 times.⁵³

The United States struggled early in the war as well -- finishing with solid performances in the conduct of operational art. Introspective preoccupation within the U.S. Military of the 1930s had forced senior World War II leaders to learn the essence of operational art the hard way. "And to their credit, commanders and their staffs gradually perfected the art of conducting massive and joint operations across vast distances to reach strategic objectives."⁵⁴

The incorporation of World War II operational lessons into U.S. Army doctrine (as well as actual employment) was largely a failure. "Although World War II had been planned, executed, and won by a series of complex operational

campaigns, the mechanics of that effort had been largely forgotten by the early 1950s.”⁵⁵ Inter-service cooperation – an imperative of operational art – was constrained, in part, by the emergence of the U.S. Air Force, the limits of the 1947 National Defense Reorganization Act, and the budgetary squabbling resulting from the Eisenhower Administration’s Cold War policy of massive retaliation. The 1954 Field Service Regulations firmly professed that “Army combat forces do not support the operations of any other components.”⁵⁶ The U.S. Army, in most respects, reverted to its traditional tactical focus where it generally remained until the aftermath of the Vietnam War.

The origins and recent history of operational art reveal that its development was the result of inspiration, necessity, technological advances, as well as, evolutionary setbacks and progress. No one theorist or practitioner can claim credit for the birth or full development of operational art. To be sure, its development has a link to the Industrial Revolution. Most experts in the field seem to believe that the birth of operational art can also trace its lineage to the middle of the 19th century.⁵⁷ The World Wars of this century expanded war’s effects in terms of time and space – creating a more pronounced gap between strategy and tactics. Operational art serves to fill this expanding gap. This of course is the patent (albeit important) answer to explain operational art. However, there must be more to this important theoretical construct than linking together strategy and tactics.

In a theoretical paper titled *Vulcan’s Anvil: The American Civil War and the Emergence of Operational Art*, Dr. James Schneider claims that U.S. Grant’s

1864-1865 campaign marks the birth of operational art. Dr. Schneider differentiates between classical strategy and operational art by describing maneuver and battle. The classical strategy in the Alexandrian genre was one of concentrated maneuver and concentrated battle. Classical strategy in the Napoleonic genre was one of concentric maneuver, yet still retained concentrated battle. In contrast, the characterization of operational art is one extended maneuver and deep battle.⁵⁸

More importantly, Dr. Schneider specifically offers eight distinctive attributes inherent to operational art. These attributes, listed and defined below in Table 3-1, offer a more specific composition to operational art.

<u>Attribute</u>	<u>Definition</u>
• Distributed Operation	An ensemble of deep maneuvers and distributed battles extended in space and time but unified by a common aim.
• Distributed Campaign	The final structure built by the operational artist – characterized by the integration of several simultaneous and successive distributed operations.
• Continuous Logistics	Concerned with the movement and sustainment of armies in the field. Continuous logistics maintains both the movement tempo and force density of the army.
• Instantaneous Command and Control	Distributed deployment of forces creates a greater variety of unexpected or unanticipated tactical and operational possibilities – necessitating enhanced command and control.
• The Operationally Durable Formation	A formation capable of conducting indefinitely a succession of distributed operations – a byproduct of continuous logistics and continuous command and control.
• Operational Vision	Associated with mental agility, the ability to react to incoming information faster than it arrives. The ability to see the whole view of war.
• The Distributed Enemy	The operationally durable formation operates most effectively against a similarly designed opponent. If there is nothing to strike, the operational artist may have trouble describing the way of linking tactical means to strategic ends.
• Distributed Deployment	Ties together a nation's ability to generate and field an army. Includes production capacity, working population, natural resources, infrastructure, and mobilization procedures. ⁵⁹

TABLE 3-1, Schneider's Attributes of Operational Art

These attributes make sense. They especially make sense when viewed from the standpoint of the artist vice the empirical scientist. These attributes provide content to operational art, but not the exacting definition required by science. For example, the distributed enemy attribute implies the necessity of facing a similarly designed opponent in order to achieve operational success. If this is so, does the lack of a similarly designed opponent intrinsic to guerrilla warfare and many recent stability operations negate the importance of operational art? No. The attribute bends, but it does not break. The lack of a similar design makes the actual opponent harder to identify, acquire and engage. The opponent still exists – and requires greater imagination and different techniques to engage fully. The colors of the artist are different – perhaps watercolors instead of oil paints are needed. Another consideration regarding stability operations and operational art is that most conventional wars throughout history include these lesser forms of warfare. Because of its interactive nature, conflict must be accepted as it comes to us. Regardless of the form of conflict one is faced with, it is imperative to be able to adapt to conflict's very complex nature.

From these eight attributes it is possible to distill three overarching features of operational art. For the purpose of this monograph, feature implies a more general content than attribute. This inductive approach yields the following three interrelated features of operational art: size, balance, and comprehensiveness. Each of Schneider's eight attributes of operational art fall under at least one (sometimes more) of these features. Size denotes a certain

magnitude of forces and geography. It is the size of the theater or the sheer number of forces that have driven the need for operational art. From a doctrinal standpoint, size marks the evolutionary growth in importance of the term “commander’s intent.” As the battlefield has grown in size (spurred by technological advances in weaponry), combat decision making has been forced down to junior leaders. Clearly written intent statements provide the necessary direction for subordinate leaders when the original plan no longer fully applies. The attributes of continuous logistics, instantaneous command and control, the operationally durable formation, and the distributed deployment all find some sort of attachment to this feature size. This feature suggests a location on the science half of an art to science continuum.

Balance represents the paradox in warfare. In order to perform or display a necessary capacity, one must have the ability to achieve its opposite effect. For example, the endless debate between maneuver and firepower is one of balance. “We maneuver in order to bring fire on the enemy. We bring fire on the enemy so that we can maneuver. One should not happen – indeed could not happen – without the other.”⁶⁰ Balance for the operational artist also includes (but is not limited to) linear/nonlinear, sequential/simultaneous, offensive/defensive, centralized/decentralized operational considerations. Two of Schneider’s attributes, the distributed enemy and the distributed campaign, show an association to balance. Balance, by its very nature displays both of the characteristics of art and science.

The final two attributes, distributed campaign and operational vision, fall under the feature labeled comprehensiveness. Comprehensiveness infers a holistic approach to warfighting – one that is focused on the objective. Not only does it mean the use of all available tools (joint, combined, stability, support operations), but it also requires a proper understanding of a beginning and an end to the campaign or operation. “Operational art, as a unique style of military art, became the planning, execution, and sustainment of temporally and spatially distributed maneuvers and battles, all viewed as one organic whole.”⁶¹ Comprehensiveness is where the art portion of operational art predominantly resides.

As discussed in the doctrinal overview section, the recent development of U.S. Army doctrine (as it relates to operational art and FM 100-5) can be broken into three phases: the 1986 (1976-1986) manual, the 1993 manual, and the 1998 manual. Each phase presents distinct characteristics that are important to the formulation of operational art (See Table 3-2). The characteristics are assigned the applicable feature of operational art, as well as, a corresponding relative value (positive (+), negative (-), and neutral (o)).

Table 3-3 represents a compilation of the relative values assigned in Table 3-2. From this table, one can see the following trends with respect to achieving operational art. First, the 1986 manual displays a weakness with respect to comprehensiveness, because it fails to address OOTW. Size is neutral due to the manual’s failure to address commander’s intent with any

degree of depth. The 1986 manual achieves balance by addressing in detail, maneuver and firepower, and sequential and simultaneous operations.

<u>Phase</u>	<u>Characteristic</u>	<u>Feature</u>	<u>Value</u>
1986	Operational Focus		
	• OOTW not addressed	Comprehensiveness	(-)
	• Commander's intent hardly mentioned	Size	(o)
	• Displays good balance (firepower/maneuver, sequential/simultaneous)	Balance	(+)
1993	Strategic Focus		
	• Inclusion of OOTW (though fragmented)	Comprehensiveness	(o)
	• Overemphasis of simultaneous operations	Balance	(-)
	• Overemphasis of the offense	Balance	(-)
	• Introduction of battlespace	Size	(o)
	• Commander's intent pragmatically addressed	Size	(+)
	• Conflict termination considered	Comprehensiveness	(o)
1998	Operational Focus		
	• War as a form of conflict and categories of operation	Comprehensiveness	(+)
	• Battlespace less nebulous	Size	(o)
	• Better presentation of commander's intent	Size	(+)
	• Tactical functions	Comprehensiveness	(+)
	• Balance between offense and defense	Balance	(o)
	• Balance between simultaneous and sequential operations	Balance	(+)
Table 3-2, Doctrinal Characteristics and Relative Values			

<u>Feature</u>	<u>1986</u>	<u>1993</u>	<u>1998</u>
Size	(o)	(+)	(+)
Balance	(+)	(-)	(+)
Comprehensiveness	(-)	(o)	(+)
Table 3-3, Compilation of Relative Values			

Second, the 1993 manual improves with respect to the size and comprehensiveness features of operational art. The formal introduction of commander's intent and the concept of battlespace help achieve a positive relative value in size. Consideration of conflict termination and the inclusion of OOTW, despite fragmentation, help to improve the comprehensiveness feature to a neutral relative value. Balance suffers a degradation in relative value, because of an imbalance of simultaneous and offensive operational considerations.

Finally, the 1998 manual achieves positive relative values regarding the size, balance, and comprehensiveness features of operational art. Where past manuals achieved positive values in either size or balance, only the 1998 manual achieves a positive relative value with respect to comprehensiveness. To be sure, it is the adoption of the four categories of operations that enables the holistic (and hence comprehensive) approach to doctrine. By adopting the theory of conflict, and accepting that war is but a most violent form of conflict, the 1998 manual avoids most of the tension associated with war/OOTW focus of the 1993 manual.

It is the size, balance, and comprehensiveness, inherent within operational art, that enables the 1998 manual to better meet the changing requirements of conflict. In order to better illustrate this assertion, the following practical application (in the form of historical case studies) will show recent success and failure on the part of U.S. Army in both conventional and less than conventional operations.

Practical Application

The art of planning is not to predict, but to anticipate. The most certain way to constrain unpredictability is to seize the initiative, maintain the momentum, and exploit success. Setting the terms of battle at the outset and never letting the enemy recover should be the aim of the plan. Every success must be exploited and every exploitation must lead to the next success. Planning, therefore, never loses its focus on execution. The plan is a continuous, evolving framework that maximizes opportunities – a point of reference rather than a blueprint.⁶²

The idea, posed above, that an operational plan is a continuous evolving framework – a reference point – is an essential consideration for planning successful operations. Much like the expert billiard player who is thinking two or three moves ahead of the current shot, operational planners and commanders must ensure their focus is on the future. This focus is one of anticipation – trying to bring the necessary forces and equipment together in order to meet future needs.

The purpose of this section is to determine the practical application of the proposed changes in doctrine. In so doing, it will demonstrate the efficacy of the holistic approach to doctrine underscored in the 1998 FM 100-5. This practical application will relate historical events from four recent U.S. Military operations to the three features (size, balance, and comprehensiveness) of operational art – introduced in the previous section. The four recent U.S. Military operations include: the Invasion of Panama in 1989-90 (Just Cause), the Gulf War of 1990-91 (Desert Shield/Storm), the Somalia relief efforts of 1993 (Restore Hope), and the stability operations in Bosnia from 1995-96 (Joint Endeavor). These operations involved varied forms of conflict, and therefore present a reliable

gauge of the proposed doctrine and its ability to meet the needs of future operations.

In terms of size, Operation Desert Shield/Storm offers many instructive examples. Clearly the number of forces deployed into theater at both the tactical and operational levels demonstrate enormous size. Defense Intelligence Agency (DIA) estimated an Iraqi troop strength of 540,000 soldiers. This figure matches the 31 nation Coalition total of 540,000 soldiers, sailors, airmen, and marines.⁶³ The corresponding equipment requirements for so large an aggregation reinforce the notion of size.

Despite the ponderous amount of equipment moved into what was mostly a barren theater, the importance of specific items of "non-lethal" equipment as potential war stoppers' confirms the theater's geographic size. Given the pre-attack movement requirements, heavy equipment transporters (HETs) and lowboys became critical assets. Required to move the many armored vehicles (and other forms of heavy equipment), 3rd Army (assisted by the Army vice chief of staff) conducted a worldwide scramble (the great HET hunt) to obtain more. HET tires were at one point were the most critical item of equipment for the theater army.⁶⁴

Another important equipment program that proved essential to victory in the Persian Gulf, was as equally "non-lethal" as the HET – the heavy expanded mobility tactical truck (HEMTT). Though HEMTT's are available in a variety of configurations, the HEMTT fuelers and cargo vehicles proved to be *sin quo non* for rough terrain transport of fuel and ammunition throughout the large theater.

“HEMTT fuelers were so important that significant air transport was dedicated to bringing in 269 [more]. Without the 100 HEMTT fuelers issued to the 24th Division, it is unlikely that the “Victory Division” would have made it to the Euphrates valley.”⁶⁵

Given the great emphasis on mobility enhancing equipment, it is apparent that theater size was a primary consideration for operational planners. The administrative movement West required HETs. The wheeling movements of both XVIII and VII Corps’ were made possible, in part, with Oshkosh’s HEMTT fuelers.

Striking the correct balance in a combat operation is a difficult task. Crafting the correct poise between firepower and maneuver, offense and defense, centralized and decentralized, and sequential and simultaneous operations require clarity of vision. In an article titled *Simultaneity -- The Panama Case*, General’s Maxwell Thurman and William Hartzog claim that a valuable lesson learned from Operation Just Cause, was “the principle of simultaneous operations.”⁶⁶ However, this supposed lesson learned is misleading – if not wrong. The authors would have you believe that simultaneous operations are the proverbial “silver bullet” to warfighting. As stated before, the correct balance achieved by operational planners almost always requires sequential, as well as, simultaneous operations.

The United States’ invasion of Panama is an example of an operation, though deemed by many as an unqualified success, that failed to achieve the surgical, well-orchestrated victory intended. According to the SOUTHCOM

Commander in Chief, General Thurman, "Planes flew, ships sailed, and, on the night of 20 December, 27, 081 soldiers, sailors, airmen, and marines attacked 27 targets simultaneously. By dawn of the 21st, most military objectives were accomplished."⁶⁷ On the surface, given the minimal loss of U.S. lives and the eventual apprehension of President Manuel Noreiga, General Thurman's statement appears accurate. However, a closer examination of the events in Panama from late December through the end of January, reveal a glaring operational shortcoming.

The shortcoming is the very issue of Thurman's and Hartzog's article -- simultaneity. Thurman and Hartzog offer a dart board analogy to support their case for simultaneity. While Noriega was the bull's-eye, there were also a small group of corrupt "9- ring" subordinates to contend with. Subordinate units and commanders occupied the "7 and 8 rings," while there were also unit sites and airfields within 30 miles (the "6 and 7 rings") of the major cities.⁶⁸ Without a definitive explanation, the author's maintain that "it was absolutely clear that all targets, both in terms of structure and geography out to about the "6 ring," had to be dealt with simultaneously."⁶⁹ This is a dangerous assertion -- it implies that all serviced targets were of similar importance.

A flawed command and control structure, can also trace its roots back to the issue of simultaneity. XVIII Airborne Corps (ultimately JTF-South (JTF-SO)) was designated as the warfighting headquarters despite the presence of US Army South (USARSO) and its function as JTF-Panama (JTF-PM). Headquartered at Fort Bragg, XVIII Corps tried "simultaneously to deploy [itself],

absorb the JTF- PM staff, assume command of in-place forces, and control the flow of H-hour and follow-on forces. This was a prescription for failure.”⁷⁰ By trying to do everything at once, JTF-SO developed a plan “with tertiary missions enjoying the same (and often higher) priority than the most critical missions.”⁷¹

In Somalia, Operation Restore Hope ultimately provided little hope for selected members of Task Force Ranger. During a failed mission to capture General Muhamed Farrah Aideed, U.S. forces discovered the benefit of having a balanced force package containing both conventional and unconventional capabilities. “Armored forces, with the protection to shrug off machine-gun slugs and rifle bullets, could have broken through the masses of SNA [Somalia Nation Alliance] small-arms shooters surrounding TF Ranger.”⁷² However, U.S. armored vehicles were nowhere to be found. As the situation unraveled on 3 October 1993, Americans forces were faced with a reenactment of Custer at Little Bighorn. Commanders scrambled to request armored assistance from UN allies. Whether it was this lack of armor or, as Major General William Garrison (the Commander of Task Force Ranger) asserted, a lack of AC-130s, the force package was inadequate.⁷³ If this is so, why did Garrison elect to conduct the operation without the balance required for successful mission accomplishment?

Operation Joint Endeavor in Bosnia illustrates a stability operation that achieves better balance. Despite conducting a politically sensitive stability operation, U.S. forces maintained enough of a credible offensive threat to deter the Former Warring Factions. Overt displays of intent and combat power were a means of maneuvering to gain the political as well as military advantage.⁷⁴ Task

Force Eagle's offensive threat was credible and robust. "Commanders felt that representatives of the Former Warring Faction were significantly deterred by the TF Eagle's armor systems (tank and BFV), heavy artillery, army aviation, and the ability to effectively synchronize those combat assets."⁷⁵

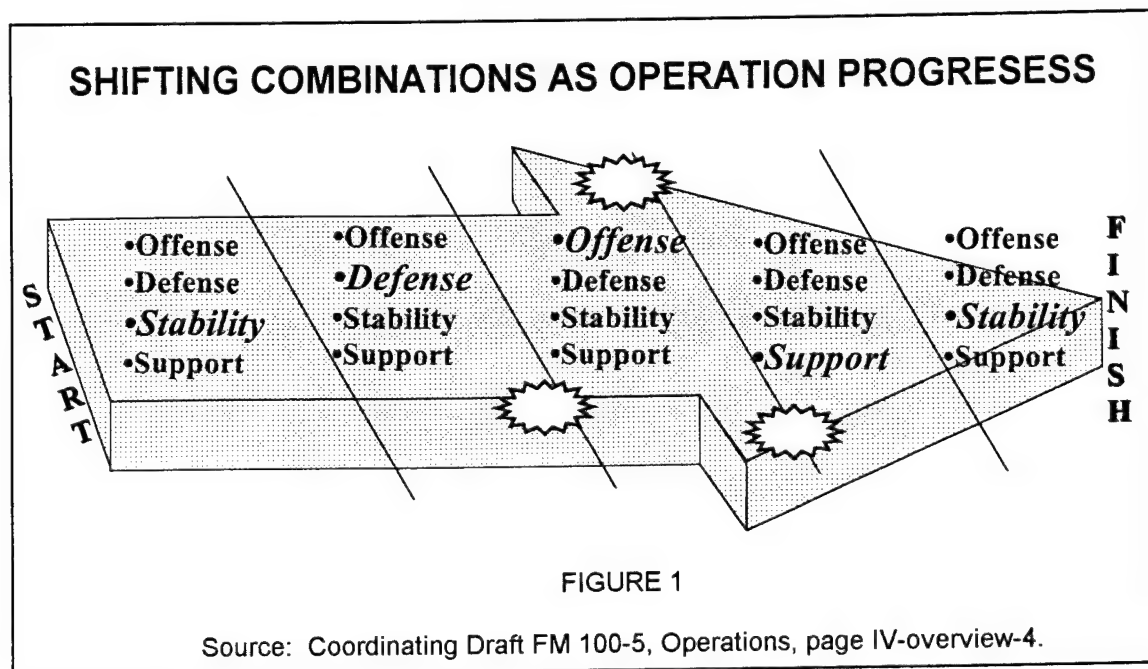
From a standpoint of balance, one can see some glaring problems associated with operations in both Panama and Somalia. In Bosnia, Operation Joint Endeavor demonstrated a stability operation with the necessary offensive punch to enforce the General Framework Agreement. With the proper balance, planners and commanders have a greater capacity to manage and deal with immediate change.

In simplistic terms, comprehensive plans require not only a thorough understanding of the mission, but a cognizance of both asset visibility and available time. The 1998 FM 100-5 addresses the need of a comprehensive approach to planning and conducting operations, by stressing the likelihood of shifting emphasis throughout an operation. Figure 1, shown below, demonstrates this point. Notice that all four categories of operations are considered in each phase of the operation.

To further illustrate the value of comprehensive doctrine, Operations Just Cause and Desert Shield/Storm show respective failure and success. In Panama, JTF-SO overwhelmed the PDF and eventually cornered Manuel Noriega in the nunciature at Punta Paitilla. However, as the dog who finally grabs hold of the car bumper he continually chases, what to do next? By ignoring the logic of a more balanced (in terms of combat support and combat

service support) troop list, JTF-SO found itself faced with many requirements that went beyond its massive simultaneous attack – with limited means to accomplish them.

After the battles were fought and won, it became a matter of debate who should assume the role of seeing Panama through to stability. The infantry were not accustomed to mop-up operations, and the personnel trained in peacekeeping and civil action – MPs, civil affairs, and special forces – were in short supply. In the end, soldiers in all specialties shared the burden, but their experience was far from ideal.⁷⁶



Problems stemmed from more than just the lack of the right military occupational specialties (MOS). Colonel Linwood Burney's 2^d Brigade 7th ID(L) quickly discovered the real meaning of "light" infantry. "Once the shooting was over, it became evident that getting Panama back on its feet would be a massive job."⁷⁷ The brigade faced transportation shortages compounded by routes that were not entirely secure. "Because of lift constraints imposed on units that deployed from the States, 2d Brigade had to limit its load to the equivalent of

about forty C-141s, one third its requirement.”⁷⁸ All types of transportation were in short supply.

The 7th ID (L) also found themselves pulled from typical infantry missions to conduct a significant amount of public works missions. Sanitation quickly became a major concern of the U.S. military’s public-health effort in Panama. Army combat engineers learned that “Colon had three pumping stations to move the city’s sewage to treatment plants, but none of the pumps worked.... In many cases, sewage ran right into the street.”⁷⁹

With the combat arms units serving as logisticians and facility engineers, the situation in the post-offensive phase of Operation Just Cause was marked by confusion and a reduction in mission focus. Not only would the stability and support tasks require greater time to conduct, the combat arms unit’s ability to conduct traditional security tasks suffered a corresponding degradation. According to Colonel Burney, “There is no format for these kinds of things, so we did what people would normally do: improvise.”⁸⁰

While military operations in Panama lacked a comprehensive approach, the Gulf War, in general, demonstrates greater forethought on the part of operational planners. The sheer number of allied forces in theater, along with more available time, enabled planners to think logically about follow-on operations. However, there were many tasks to accomplish.

One critical task involved the reconstruction of Kuwait following the Iraqi Army’s forced ejection from that country. Damage from the August 1990 Iraqi invasion, as well as any collateral damage incurred during the proposed air and

ground offensive phase required the consideration of planners. Kuwaiti officials in exile turned to the U.S. Army Corps of Engineers to repair the damage to Kuwait's infrastructure. The Corps was selected for a variety of reasons: its recent construction experience in both Kuwait and Saudi Arabia, and the Corps' emergency responses to natural disasters during the late 1980s.⁸¹ Though not mentioned outright, the selection of the U.S. Army Corps of Engineers also made good political sense. As the Department of Defense's largest and most capable construction agency, Kuwait selected a sub-element of the organization that would ultimately shoulder the burden of liberating its country.

Already in theater (as the DOD construction agent for CINCCENT) with the Middle East/Africa Projects Office (MEAPO), the Corps of Engineers created an additional organization. The function of this organization was to plan, contract and administer the 14 January 1991 \$46.35 million dollar Foreign Military Sales (FMS) contract established with Kuwaiti Government. "The Corps established the Kuwait Emergency Recovery Organization (KERO) under Colonel Ralph Locurcio to conduct damage surveys and administer reconstruction contracts."⁸² Planning commenced immediately in the United States and soon moved to the Theater of Operations. "On 28 January, an advance party from the Corps' KERO arrived in Saudi Arabia, where it executed contracting actions and logistical purchases necessary to accomplish the reconstruction mission."⁸³ Third Army formed Task Force Freedom, under the command of Major General Bob Frix (Deputy Commander of 3d Army), to

provide centralized direction (in the form of command or operational control relationship) to KERO, logistical, and civil affairs units.⁸⁴

KERO and Task Force Freedom wasted no time in effecting emergency repair of Kuwait. The emergency recovery of Kuwait demonstrates the value of prior planning.

Army personnel found Kuwait severely damaged but not destroyed. The amount of structural damage was less than anticipated, but the entire country was without water, electricity, sanitation and other basic infrastructure. The most critical tasks for KERO were to assess the damage and mobilize the eight firms selected to do the reconstruction work.⁸⁵

An example of the emergency recovery's efficiency, was the rapid restoration of Kuwait City's primary power. "Through these efforts, primary power was restored to Kuwait City on 23 March, only a month after the Iraqis had cut it off."⁸⁶

Finishing a full 30 days ahead of schedule, executive agency for restoration of Kuwait transferred from CINCCENT to the Secretary of the Army on 30 April 1991. USACE Major General Kelly assumed command of the Defense Recovery Assistance Office (DRAO), and with it, the responsibility for long-term reconstruction efforts in Kuwait.⁸⁷

The Kuwait recovery operations demonstrate a smooth transition from offensive to stability and support operations. This transition fits very well with the operational flow depicted in Figure 1. The ability to shift emphasis as the operation progresses is important. In Operation Just Cause, JTF-SO was

unable to affect a smooth transition because it lacked comprehensive forethought.

These practical applications demonstrate that military operations require plans that are balanced and comprehensive – and that anticipate future requirements. It is not enough to defeat the enemy armed forces. Planners must provide commanders and political leaders with sound options that encompass the entire range of conflict. Doctrine is one means of training planners to think holistically about employing military force to meet the full range of conflict.

Conclusion

To keep the operational art institutionally alive as a war-fighting concept, on the other hand, would show good long term judgment, as the days of large armies and great wars just might not be over.⁸⁸

As stated in the introduction, the purpose of this monograph was to examine the development of the 1998 FM 100-5. Specifically, to question whether the changes proposed in the 1998 FM 100-5 mark a return to the concept of operational art? The answer is affirmative.

The proceeding declarative statement has basis in past, current and proposed doctrine. The last twenty years of FM 100-5, *Operations*, mark a series of focus change. The 1976 manual, developed following the Vietnam War, was tactically focused – designed for war in Europe. The 1980s produced two manuals that advocated the concept of Airland Battle. The introduction of the operational level of war in 1982 and the subsequent adoption of operational art in 1986 enabled a shift away from the U.S. Army's traditional tactical focus.

The 1993 FM 100-5 served to shift the Army's doctrinal focus away from operational art, advocated by the 1986 manual, towards the strategic realm. This strategic focus, influenced by victories in Panama and the Gulf War, was a direct result of the Soviet Union's timely demise in 1989.

The 1998 FM 100-5 signifies a return to operational art because it better meets the features of size, balance and comprehensiveness. In particular, the manual addresses a holistic approach to military operations that engenders a variety of options for both military planners and commanders. It is these multiple options that are, in essence, the paints, brushes, and canvas of operational art. The picture (the conduct of military operations) painted by the operational artist suffers routinely the criticism of historians, much like commentary of art critics on conventional artwork. Commentary and criticism are ultimately less important than the tangible results – the lasting picture or the successful military operation that helps achieve U.S. policy.

The 1998 FM 100-5 marks a return to operational art. In so doing, this keystone manual will help to ensure that the Army focuses its efforts at the operational level of war, and the conduct of operational art. The concept of operational art is an important one. It allows the Army to relate tactical means to ever changing strategic ends. It provides a framework for large operations (if they should arise). Finally, operational art provides an Army with a tactically focused history, the opportunity to come to the joint arena and better relate to its sister services.⁸⁹

ENDNOTES

¹ Paul H. Herbert, *Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations* (Fort Leavenworth, KS: Command and General Staff College, 1988), 3.

² Herbert, 3.

³ U.S. Army, *Coordinating Draft of Field Manual 100-5, Operations* (Fort Leavenworth, KS: Command and General Staff College, 14 January 1997), IV-overview-1.

⁴ John L. Romjue, *American Army Doctrine for the Post-Cold War*. (Fort Monroe, VA: TRADOC Historical Monograph Series, 1996), 8.

⁵ Ann E. Story, and Aryea Gottlieb, "Beyond the Range of Military Operations," *Joint Force Quarterly*, Autumn 1995, 99-104. In their article, the authors claim that MOOTW [OOTW] is an ambiguous concept that fails to provide the fundamental principles required for doctrine and is thus flawed. The authors propose a Military Operational Framework to rectify the problem. For additional examples of OOTW critics, one can read the many articles that unfavorably critique former Secretary of Defense Les Aspin (mission creep) following the October 1993 actions in Somalia.

⁶ U.S. Army, *Field Manual 100-5, Operations* (Washington D.C.: U.S. Government Printing Office, 1986), 10.

⁷ James J. Schneider, "The Theory of Operational Art" (Monograph, School of Advanced Military Studies, Command and General Staff College, 1988), 44-45.

⁸ Harry G. Summers, *On Strategy* (Navato, CA: Presidio Press, 1982; Dell Publishing, 1984), 21-22.

⁹ T.E. Lawrence, "The Evolution of a Revolt," *Army Quarterly and Defence Journal*, reprinted by Combat Studies Institute, (Fort Leavenworth, KS: Command and General Staff College, 1990), 11.

¹⁰ David Jablonsky, "US Military Doctrine and the Revolution in Military Affairs." *Parameters* Autumn 1994, 21-22.

¹¹ Ibid., 22.

¹² Romjue, 7-8.

¹³ Richard M. Swain, "Filling The Void: The Operational Art and the U.S. Army." *The Operational Art* (Westport, CT: Praeger, 1996), 160, 166.

¹⁴ Field Manual 100-5, *Operations*, 1986, i.

¹⁵ Ibid., i.

¹⁶ Bill Robertson of TRADOC Force Design Directorate, interview by author, Fort Leavenworth, KS., 2 September 1996.

¹⁷ Romjue, 14.

¹⁸ Romjue, 121.

¹⁹ U.S. Army, *Field Manual 100-5, Operations* (Washington D.C.: U.S. Government Printing Office, 1993), iv.

²⁰ David A. Fastabend. "Checking the Doctrinal Map: Can We Get There from Here with FM 100-5?" *Parameters*, Summer 1995, 38.

²¹ Coordinating Draft of Field Manual 100-5, *Operations*, 14 January 1997, i.

²² U.S. Army, *Field Manual 100-5, Field Service Regulations – Operations* (Washington D.C.: U.S. Government Printing Office, 1962), 155.

²³ James McDonough, COL (Ret.), Former Director of the School of Advanced Military Studies and the 1993 FM 100-5 Writing Team, interview by author, 13 March 1997. McDonough states that on the whole, many branch chiefs and tactical level commanders opposed including OOTW in FM 100-5.

²⁴ Romjue, 132.

²⁵ Colin L. Powell, *My American Journey* (New York: Random House, 1995), 518-522, and H. Norman Schwarzkopf, *It Doesn't Take A Hero* (New York: Bantam Books, 1992; Bantam Books, 1993), 541-547, and Randall Richard, "Like Fish In a Barrel, U.S. Pilots Say," *Washington Post*, 27 February 1991, sec. A, p. 28.

²⁶ Field Manual 100-5, *Operations*, 1993, 6-12.

²⁷ L.D. Holder, "Offensive Tactical Operations." *Military Review*, December 1993, 49.

²⁸ Coordinating Draft of Field Manual 100-5, 14 January 1997, III-2-11.

²⁹ James McDonough, interview by author, 13 March 1997.

³⁰ Romjue, 133.

³¹ Comment made by a AMSP student to General (Ret.) Sullivan during a presentation made at Fort Leavenworth, KS on 23 October 1996. General Sullivan claimed that he was disappointed that the 1993 manual did not spark serious debate within the Army.

³² Swain, 147.

³³ FM 100-5 Writing Team, briefing presented to CG TRADOC, 12 December 1996.

³⁴ Coordinating Draft of Field Manual 100-5, *Operations*, 14 January 1997, i-ii.

³⁵ The shift to orchestration implies the necessity for an adaptive form of synchronization. This means that the synchronization obtained must be ongoing and dynamic in order to operate successfully on the chaotic battlefield.

³⁶ Coordinating Draft of Field Manual 100-5, *Operations*, 14 January 1997, I-2-4.

³⁷ Swain, 166.

³⁸ David A. Fastabend, "A General Theory of Conflict: Bosnia, Strategy, and the Future." (War College Thesis, Carlisle Barracks, PA: U.S. Army War, 1996), 18.

³⁹ Coordinating Draft of Field Manual 100-5, *Operations*, 14 January 1997, II-4-1.

⁴⁰ FM 100-5 Writing Team, briefing presented to CG TRADOC, 12 December 1996. See bibliography for specifics on Fuller and Johnson's specific works.

⁴¹ Coordinating Draft of Field Manual 100-5, *Operations*, 14 January 1997, II-5-1.

⁴² Ibid., IV-overview-1.

⁴³ Ibid., IV-overview-1.

⁴⁴ Ibid., IV-overview-1.

⁴⁵ COL Michael Combest of the 1998 FM 100-5 Writing Team, interview by author, Fort Leavenworth, KS, 19 February 1997.

⁴⁶ Coordinating Draft of Field Manual 100-5, *Operations*, 14 January 1997, IV-overview-1.

⁴⁷ Ibid., IV-4-1.

⁴⁸ William Stofft, "Leadership at the Operational Level of War," in *On Operational Art* (Washington D.C.: Center for Military History, 1994), 192.

⁴⁹ L.D. Holder, "A New Day for Operational Art." *Army*, March 1985, 22.

⁵⁰ Joint Publication 5-0, *Doctrine For Planning Joint Operations* (Washington D.C.: U.S. Government Printing Office, 1995), I-2.

⁵¹ James J. Schneider, "Theoretical Implications of Operational Art," in *On Operational Art* (Washington D.C.: Center for Military History, 1994), 25.

⁵² James J. Schneider, "Theoretical Implications of Operational Art," in *On Operational Art* (Washington D.C.: Center for Military History, 1994), 24-27, and Bruce W. Menning, "An Operator/Planner's Introduction to Operational Art," in *C510 Course Syllabus: Strategic, Operational, and Joint Environments* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1995), 192-193.

⁵³ Bruce W. Menning, "An Operator/Planner's Introduction to Operational Art." *C510 Course Syllabus: Strategic, Operational, and Joint Environments* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1995), 194.

⁵⁴ Ibid., 194.

⁵⁵ Clayton R. Newell, and Michael D. Krause, editors, *On Operational Art* (Washington D.C.: Center for Military History, 1994), 4.

⁵⁶ U.S. Army, *Field Manual 100-5, Field Service Regulations, Operations* (Washington D.C.: U.S. Government Printing Office, 1954), 4.

⁵⁷ James J. Schneider, Bruce W. Menning, and John English all state that operational art is a product of the industrial revolution (See Bibliography for specific works).

⁵⁸ James J. Schneider, "Vulcan's Anvil: The American Civil War and the Emergence of Operational Art" (Fort Leavenworth, KS: U.S. Army Command General Staff College, 1991), 32.

⁵⁹ Ibid., 38-67.

⁶⁰ James McDonough, "The Operational Art: Quo Vadis?" *Maneuver Warfare: An Anthology* (Novato, CA: Presideo Press, 1993), 110-111.

⁶¹ Schneider, "Vulcan's Anvil: The American Civil War and the Emergence of Operational Art," 30.

⁶² Coordinating Draft of Field Manual 100-5, *Operations*, 14 January 1997, III-2-1.

⁶³ Department of Defense. *Conduct of the Persian Gulf War: Final Report to Congress* (Washington, D.C.: U.S. Government Printing Office, 1992), 85-86.

⁶⁴ Richard M. Swain, *Lucky War* (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1994), 157.

⁶⁵ Ibid., 161.

⁶⁶ Maxwell R. Thurman, and William Hartzog. "Simultaneity: The Panama Case," *Army*, November 1993, 16.

⁶⁷ Ibid., 20.

⁶⁸ Ibid., 19.

⁶⁹ Ibid., 19.

⁷⁰ Tacitus (pseud.). "Few Lessons Were Learned in Panama Invasion: Just Cause Victory Came Despite Ineptitude," *Armed Forces Journal International*, June 1993, 54.

⁷¹ Ibid., 54.

⁷² Daniel P. Bolger. *Savage Peace: Americans at War in the 1990s* (Novato, CA: Presidio Press, 1995), 324.

⁷³ Congress, Senate, Committee on Armed Services, *U.S. Military Operations in Somalia*, 103rd Cong., 2nd sess., 12 May 1994, 12, 39.

⁷⁴ Center For Army Lessons Learned. *Initial Impressions Report: Operation Joint Endeavor, Task Force Eagle Initial Operations* (Fort Leavenworth, KS: U.S. Government Printing Office, 1996), 128.

⁷⁵ Ibid., xv.

⁷⁶ Thomas Donnelly, Margaret Roth, and Caleb Baker. *Operation Just Cause: The Storming of Panama* (New York: Lexington Books, 1991), 374.

⁷⁷ Ibid., 358.

⁷⁸ Ibid., 359.

⁷⁹ Ibid., 374, and Major Dennis Polaski, 3rd Brigade Engineer, 7th ID (L) in Panama, interview by author, Fort Leavenworth, KS, 22 March 1997.

⁸⁰ Donnelly, Roth, and Baker, 355.

⁸¹ James W. Ray, Michael J. Fisher, and Stephen Sheppard. "Emergency Recovery Assistance to Kuwait." *Military Engineer*, May-June 1991, 11.

⁸² Robert H. Scales. *Certain Victory: The US Army in the Gulf War* (Washington, D.C.: U.S. Government Printing Office, 1993), 335.

⁸³ Janet A. McDonnell. "Rebuilding Kuwait." *Military Review*, July 1993, 54.

⁸⁴ Janet A. McDonnell, USACE Historian who covered the Gulf War and the emergency reconstruction efforts in Kuwait, telephone interview by author, 26 March 1997. Evidence clearly indicates that regardless of the command relationship between KERO and Task Force Freedom (and ultimately 3d Army and CENTCOM) executive agency for the scheduled 90 day emergency reconstruction effort belonged to CINCENT.

⁸⁵ McDonnell, 53.

⁸⁶ Ibid., 54.

⁸⁷ Scales, 337-338.

⁸⁸ John English, "The Operational Art: Developments in the Theories of War." *The Operational Art* (Westport, CT: Praeger, 1996), 20.

⁸⁹ Swain, "Filling The Void: The Operational Art and the U.S. Army," 166.

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